

WHAT IS CLAIMED IS:

1. A method for cache management and
regeneration of dynamically-generated content ("DGC")
in one or more server computers within a client-server
computer network, comprising the steps of:

in response to a regeneration event, identifying a
set of one or more previously cached DGC components
affected by said regeneration event;

regenerating a new version of each affected DGC
component in said set to incorporate a criteria
associated with said regeneration event; and

replacing each affected DGC component in said set
with said respective new version of each.

2. The method of Claim 1, further comprising the
step of serving said new version of one or more of said
affected DGC components to a client computer in said
client-server network in response to a request from
said client computer.

3. The method of Claim 1, further comprising the
step of serving said new version of one or more of said
affected DGC components in the form of a dynamically-
generated page to a client computer in said client-
server network in response to a request from said
client computer.

4. The method of Claim 1, wherein:

said identifying step further comprises
identifying which of said affected DGC components
satisfy a threshold criteria;

5 said set of affected DGC components comprises only
those affected DGC components that satisfy said
threshold criteria; and

said replacing step further comprises flushing
those of said affected previously cached DGC components
10 that do not satisfy said threshold criteria.

5. The method of Claim 4, wherein said threshold
criteria is an arbitrary value of an arbitrary
parameter.

15 6. The method of Claim 5, wherein said arbitrary
parameter is an elapsed time since the last client
computer request for a DGC component or for a
dynamically-generated page.

20 7. The method of Claim 1, wherein any one or
more of said identifying, regenerating and replacing
steps can be performed at a different one of said one
or more server computers from each other.

25 8. The method of Claim 1, wherein said
regenerating step further comprises the step of
limiting to a preset threshold value the number of
affected DGC component regenerations that can
30 simultaneously occur.

9. The method of Claim 8, wherein said preset threshold value is arbitrarily determined according a desired network performance level.

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10. The method of Claim 8, wherein said preset threshold value is determined by a static descriptor, such as a configuration variable.

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11. The method of Claim 1, wherein said regeneration event comprises a change to a page template, an explicit flushing event, or a change to a DGC component.

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12. The method of Claim 11, wherein said explicit flushing event comprises the expiration of a preset time period.

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13. The method of Claim 1, wherein said criteria associated with said regeneration event is a change to a page template from which one or more previously cached dynamically-generated pages ("DGPs") were generated.

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14. The method of Claim 1, wherein said criteria associated with said regeneration event is a change to the content of one or more of said previously cached DGC components, or no criteria.

15. The method of Claim 1, wherein every cached
DGC component is associated with a custom cached file
name comprising a combination of an initial file
request name with a selected attribute of a computer
user.

16. The method of Claim 15, wherein said selected
attribute is selected from the group including browser
name, user language, computer domain, computer
platform, and content ID.

17. The method of Claim 15, wherein said selected
attribute is a default attribute.

18. The method of Claim 17, wherein said default
attribute is no user attribute.

19. The method of Claim 15, wherein said selected
attribute is used in said regenerating step to
regenerate said new versions of said affected DGC
components.

20. The method of Claim 15, wherein said selected
attribute is keyed to a particular application.

21. The method of Claim 1, further comprising the
step of updating a docroot file system to indicate
changes resulting from replacing said affected DGC
components.

22. The method of Claim 21, wherein said docroot file system is associated with a memory-based cache repository or a file-based cache repository.

Figure 10 shows the results of the sensitivity analysis. The results indicate that the most significant factor affecting the results is the choice of the discount rate. The results also indicate that the choice of the time horizon is also a significant factor. The results show that the choice of the discount rate and the time horizon are the most significant factors affecting the results. The results also show that the choice of the discount rate and the time horizon are the most significant factors affecting the results.

23. A system for cache management and regeneration of dynamically-generated content ("DGC") in one or more server computers within a client-server computer network, comprising:

5 instructions for, in response to a regeneration event, identifying a set of one or more previously cached DGC components affected by said regeneration event;

10 instructions for regenerating a new version of each affected DGC component in said set to incorporate a criteria associated with said regeneration event; and

15 instructions for replacing each affected DGC component in said set with said respective new version of each.

20 24. The system of Claim 23, further comprising instructions for serving said new version of one or more of said affected DGC components to a client computer in said client-server network in response to a request from said client computer.

25 25. The system of Claim 23, further comprising instructions for serving said new version of one or more of said affected DGC components in the form of a dynamically-generated page ("DGP") to a client computer in said client-server network in response to a request from said client computer.

26. The system of Claim 23, wherein:

said instructions for identifying further comprise instructions for identifying which of said affected DGC components satisfy a threshold criteria;

5 said set of affected DGC components comprises only those affected DGC components that satisfy said threshold criteria; and

10 said instructions for replacing further comprise instructions for flushing those of said affected previously cached DGC components that do not satisfy said threshold criteria.

15 27. The system of Claim 26, wherein said threshold criteria is an arbitrary value of an arbitrary parameter.

20 28. The system of Claim 27, wherein said arbitrary parameter is an elapsed time since the last client computer request for a DGC or for a DGP.

25 29. The system of Claim 23, wherein said instructions for regenerating further comprise instructions for limiting to a preset threshold value the number of affected DGC component regenerations that can simultaneously occur.

30 30. The system of Claim 29, wherein said preset threshold value is determined according a desired network performance level or according to a static descriptor, such as a configuration variable.

31. The system of Claim 23, wherein said
regeneration event comprises a change to a page
template, an explicit flushing event, or a change to a
DGC component.

32. The system of Claim 23, wherein said criteria
associated with said regeneration event is a change to
a page template from which one or more previously
cached DGPs were generated.

33. The system of Claim 23, wherein said criteria
associated with said regeneration event is a change to
the content of one or more of said previously cached
DGC components.

34. The system of Claim 23, wherein said criteria
associated with said regeneration event is no change.

35. The system of Claim 23, wherein every cached
DGC component is associated with a custom cached file
name comprising a combination of an initial file
request name with a selected attribute of a computer
user.

36. The system of Claim 35, wherein said selected
attribute is selected from the group including browser
name, user language, computer domain, computer
platform, and content ID.

37. The system of Claim 35, wherein said selected attribute is used in said regenerating step to regenerate said new versions of said affected DGC components.

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38. The system of Claim 35, wherein said selected attribute is not a user attribute.

39. The system of Claim 35, wherein said selected attribute is keyed to a particular application.

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40. The system of Claim 23, further comprising instructions for updating a docroot file system to indicate changes resulting from replacing said affected DGC components.

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41. The system of Claim 40, wherein said docroot file system is associated with a cache repository.

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42. The system of Claim 41, wherein said cache repository is a file-based cache repository.

43. A method for cache management and regeneration of dynamically-generated content ("DGC) in one or more server computers within a client-server computer network, comprising the steps of:

5 initiating a regeneration event to affect one or more previously cached DGC components;

 in response to said regeneration event, identifying a set of one or more of said previously cached DGC components affected by said regeneration event;

10 regenerating a new version of each affected DGC component in said set to incorporate a criteria associated with said regeneration event; and

15 replacing each affected DGC component in said set with said respective new version of each.

44. The method of Claim 43, wherein said regeneration event is initiated by a user via a user interface.

20 45. The method of Claim 44, wherein said user interface comprises a standard user-to-computer interface to access an interface program.

25 46. The method of Claim 43, wherein initiating said regeneration event comprises changing a template affecting one or more of said previously cached DGC components.

47. The method of Claim 43, wherein initiating said regeneration event comprises initiating a flushing operation.

5 48. The method of Claim 43, wherein initiating said regeneration event comprises initiating a flushing operation in response to a change in the content of one or more of said previously cached DGC components.

10 49. The method of Claim 43, further comprising the step of serving said new version of one or more of said affected DGC components to a client computer in said client-server network in response to a request from said client computer.

15 50. The method of Claim 43, further comprising the step of serving said new version of one or more of said affected DGC components in the form of a dynamically-generated page ("DGP") to a client computer
20 in said client-server network in response to a request from said client computer.

51. The method of Claim 43, wherein:
said identifying step further comprises
25 identifying which of said affected DGC components satisfy a threshold criteria;
said set of affected DGC components comprises only those affected DGC components that satisfy said threshold criteria; and

said replacing step further comprises flushing those of said affected previously cached DGC components that do not satisfy said threshold criteria.

5 52. The method of Claim 51, wherein said threshold criteria is an arbitrary value of an arbitrary parameter.

10 53. The method of Claim 52, wherein said arbitrary parameter is an elapsed time since the last client computer request for a DGC component or a DGP.

15 54. The method of Claim 43, wherein any one or more of said initiating, identifying, regenerating and replacing steps can be performed at a different one of said one or more server computers from each other.

20 55. The method of Claim 43, wherein said regenerating step further comprises the step of limiting to a preset threshold value the number of affected DGC component regenerations that can simultaneously occur.

25 56. The method of Claim 43, wherein said criteria associated with said regeneration event is a change to a page template from which one or more previously cached DGPs were generated.

30 57. The method of Claim 43, wherein said criteria associated with said regeneration event is a change to

the content of one or more of said previously cached
DGC components, or no criteria.

58. The method of Claim 43, wherein every cached
5 DGC component is associated with a custom cached file
name comprising a combination of an initial file
request name with a selected attribute of a computer
user.

10 59. The method of Claim 58, wherein said selected
attribute is selected from the group including browser
name, user language, computer domain, computer
platform, and content ID.

15 60. The method of Claim 58, wherein said selected
attribute is used in said regenerating step to
regenerate said new versions of said affected DGC
components.

20 61. The method of Claim 43, further comprising
the step of updating a docroot file system to indicate
changes resulting from replacing said affected DGC
components.

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